

APPENDIX B

FIVE-YEAR REVIEW INSPECTION CHECK LISTS

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the five-year review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: Site 2 Area A Landfill	Date of inspection: April 10, 2001
Location and Region: New London County,	EPA ID: CTD980906515
Agency, office or company leading the five-year review: EPA Region I	Weather/temperature: Overcast, 50 degrees
Remedy Includes (Check all that apply) <input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input checked="" type="checkbox"/> Other <u>Landfill gas controls, surface controls to minimize erosion, institutional controls.</u>	
<input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached	
II. INTERVIEWS (Check all that apply)	
1. O&M site manager <u>Richard Conant</u> <u>Environmental Dept</u> <u>4/10/01</u> <div style="display: flex; justify-content: space-between; margin-top: -10px;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions: <input type="checkbox"/> Report attached <u>Better house keeping measures are needed; O&M plan should be developed and implemented.</u>	
2. O&M staff _____ <div style="display: flex; justify-content: space-between; margin-top: -10px;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions: <input type="checkbox"/> Report attached _____	

3. Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency USEPA Region I

Contact K. Keckler RPM 4/10/01 (617)918-1385
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached None provided during inspection.

Agency CTDEP

Contact Mark Lewis RPM 4/10/01 (860)424-3768
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached None provided during inspection.

Agency _____

Contact _____
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached _____

Agency _____

Contact _____
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached _____

4. Other interviews (optional) ☐ Report attached.

III. ONSITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)	
1.	O&M Manual and As-Built <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> As-built <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Maintenance Logs <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
2.	Site Specific Health and Safety Plan <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Contingency plan/emergency response plan <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
3.	O&M and OSHA Training Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
4.	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Other permits _____ <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
5.	Gas Generation Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
6.	Settlement Monument Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
7.	Groundwater Monitoring Records <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>Quarterly sampling ongoing at site.</u>
8.	Leachate Extraction Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
9.	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Water (effluent) <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____

10. **Daily Access/Security Logs**
☐ Readily available ☐ Up to date ☐ N/A
 Remarks _____

IV. O&M COSTS

1. **O&M Organization**
☐ State in-house ☐ Contractor for State
☐ PRP in-house ☐ Contractor for PRP
☐ Other _____

2. **O&M Cost Records**
☐ Readily available ☐ Up to date
☐ Funding mechanism/agreement in place
 Original O&M cost estimate _____ ☐ Breakdown attached
- Total annual cost by year for review period if available
- | | | |
|---------------------|------------|---|
| From _____ To _____ | _____ | <input type="checkbox"/> Breakdown attached |
| Dates | Total cost | |
| From _____ To _____ | _____ | <input type="checkbox"/> Breakdown attached |
| Dates | Total cost | |
| From _____ To _____ | _____ | <input type="checkbox"/> Breakdown attached |
| Dates | Total cost | |
| From _____ To _____ | _____ | <input type="checkbox"/> Breakdown attached |
| Dates | Total cost | |
| From _____ To _____ | _____ | <input type="checkbox"/> Breakdown attached |
| Dates | Total cost | |

3. **Unanticipated or Unusually High O&M Costs During Review Period**
 Describe costs and reasons: Groundwater monitoring costs for 1 year (1999 - 2000), 4 quarters, are approximately \$210,000.00. This cost includes sampling, analysis, data validation, and reporting.

V. GENERAL SITE CONDITIONS

Whenever possible, actual site conditions should be documented with photographs.

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☐ Gates secured ☐ N/A
 Remarks Fencing around a portion of site, but gates are left open
No restrictions.

B. Site Access	
1.	Access restrictions, signs, other security measures <input type="checkbox"/> Location shown on map <input checked="" type="checkbox"/> N/A Remarks: <u>Perimeter fencing, but gates left open and military personnel can access site. Signs posted at entrances limiting access to authorized users and instructing no one to dig at the site because of the presence of a cap.</u>
C. Perimeter Roads	
1.	Roads damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A Remarks: _____
D. General	
1.	Vandalism/trespassing <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No vandalism evident Remarks: _____
2.	Land use changes onsite <input checked="" type="checkbox"/> N/A Remarks: <u>No changes</u>
3.	Land use changes offsite <input checked="" type="checkbox"/> N/A Remarks: <u>No changes</u>
4.	Institutional controls (site conditions imply institutional controls not being enforced) <input type="checkbox"/> N/A Agency: _____ Contact: _____ Name _____ Title _____ Date _____ Phone no. _____ Problems; suggestions; <input type="checkbox"/> Report attached _____
VI. LANDFILL COVERS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not applicable	
A. Landfill Surface	
1.	Settlement (Low spots) <input checked="" type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent: _____ Depth: _____ Remarks: _____
2.	Cracks <input checked="" type="checkbox"/> Location shown on site map <input type="checkbox"/> Cracking not evident Lengths: _____ Widths: _____ Depths: _____ Remarks: _____

3.	Erosion <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____
4.	Holes <input checked="" type="checkbox"/> Location shown on site map <input type="checkbox"/> Holes not evident Areal extent <u>Sporadic</u> Depth <u>4 inches</u> Remarks <u>Holes due to equipment storage on asphalt.</u>
5.	Vegetative Cover <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input checked="" type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks <u>None of the landfill has a vegetative cover.</u>
6.	Alternative Cover (armored rock, concrete, etc.) <input type="checkbox"/> N/A Remarks <u>Asphalt cover shows some cracks and holes due to storage use.</u>
7.	Bulges <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Bulges not evident Areal extent _____ Height _____ Remarks _____
8.	Wet Areas/Water Damage <input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____
B.	Bench <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)
1.	Flows Bypass Bench <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> N/A or okay Remarks _____

2.	Bench Breached	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
Remarks _____			
3.	Bench Overtopped	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
Remarks _____			
C.	Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	Settlement	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement	
Areal extent _____ Depth _____			
Remarks _____			
2.	Material Degradation	<input type="checkbox"/> Location shown on site map	
<input type="checkbox"/> No evidence of degradation			
Material type _____ Areal extent _____			
Remarks _____			
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
Areal extent _____ Depth _____			
Remarks _____			
4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
Areal extent _____ Depth _____			
Remarks _____			
5.	Obstructions	Type _____	<input type="checkbox"/> No obstructions
<input type="checkbox"/> Location shown on site map		Areal extent _____	
Size _____			
Remarks _____			
6.	Excessive Vegetative Growth	Type _____	
<input type="checkbox"/> No evidence of excessive growth			
<input type="checkbox"/> Vegetation in channels does not obstruct flow			
<input type="checkbox"/> Location shown on site map		Areal extent _____	
Remarks _____			

D.	Cover Penetrations	<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> Not applicable
1.	Gas Vents <input type="checkbox"/> Active <input checked="" type="checkbox"/> Passive <input type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks <u>Vents are not monitored and were only visually inspected.</u>		
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks _____		
3.	Monitoring Wells (within surface area of landfill) <input checked="" type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks <u>Wells used for monitoring in good shape; other site wells in need of repair or abandonment. See photograph.</u>		
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input checked="" type="checkbox"/> N/A Remarks _____		
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input checked="" type="checkbox"/> N/A Remarks <u>No monuments were installed.</u>		
E.	Gas Collection and Treatment		
1.	Gas Treatment Facilities <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Flaring <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____		
2.	Gas Collection Wells, Manifolds and Piping <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks <u>Visually inspected.</u>		
F.	Cover Drainage Layer <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not applicable		
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks <u>Not able to inspect.</u>		

2.	Outlet Rock Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks <u>Not able to inspect.</u>			
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable			
1.	Siltation	Areal extent _____	Depth _____ <input type="checkbox"/> N/A
<input type="checkbox"/> Siltation not evident			
Remarks _____			
2.	Erosion	Areal extent _____	Depth _____
<input type="checkbox"/> Erosion not evident			
Remarks _____			
3.	Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
4.	Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable			
1.	Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____	
Rotational displacement _____			
Remarks _____			
2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks _____			
I. Perimeter Ditches/Off-Site Discharge <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not applicable			
1.	Siltation	<input checked="" type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Areal extent _____		Depth _____ Volume = 2 cy	
Remarks <u>Fines pushed over embankment from salt storage shed.</u>			
<u>Silt/sand buildup at endwall of culvert for northern channel.</u>			
2.	Vegetative Growth	<input checked="" type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Areal extent _____		Type _____	
Remarks <u>Phragmites growing in channels</u>			

3.	Erosion <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____
4.	Discharge Structure <input type="checkbox"/> Functioning <input checked="" type="checkbox"/> N/A Remarks _____
VII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable	
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____ Depth _____ Remarks _____
2.	Performance Monitoring Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ <input type="checkbox"/> Evidence of breaching Remarks _____
VIII. GROUNDWATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable	
A.	Groundwater Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable
1.	Pumps, Wellhead Plumbing, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____
B.	Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable

1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
C.	Treatment System <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable
1.	Treatment Train (Check components that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <input type="checkbox"/> Metals removal <input type="checkbox"/> Air stripping <input type="checkbox"/> Filters _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ </div> <div style="width: 35%;"> <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Others _____ <input type="checkbox"/> Needs O&M </div> <div style="width: 5%;"> <input type="checkbox"/> Bioremediation </div> </div> Remarks _____ _____
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
3.	Tanks, Vaults, Storage Vessels <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs O&M Remarks _____ _____
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
5.	Treatment Building(s) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____ _____

6.	Monitoring Wells (pump and treatment remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____ _____
D. Monitored Natural Attenuation	
1.	Monitoring Wells (natural attenuation remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____ _____

IX. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

X. OVERALL OBSERVATIONS**A. Implementation of the Remedy**

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Based on the site inspection, the engineered cap is effective at eliminating direct exposure to the landfill contents.

The groundwater monitoring results will be reviewed to determine if it is effective in minimizing contaminant migration from the site. Gas vents appear to be functioning properly. Drainage channels installed upgradient of landfill are functioning, but not at full capacity.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

The site inspection revealed that O&M is not being completed at the site. An O&M plan should be written and implemented. 1. There is a siltation problem with the northern drainage channel and a vegetation problem. 2. Small trees are beginning to grow in rip-rap along the toe of landfill. 3. Equipment is being improperly stored on top of the landfill cap, which may eventually damage it. 4. Small depression noted on toe of landfill at south west end. Appears that excessive surface water runoff may pass through area which is causing erosion of material under rip-rap.

<p>C. Early Indicators of Potential Remedy Failure</p>
<p>Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p>Continued lack of O&M may jeopardize integrity of engineered cap.. An O&M plan should be written and implemented. The plan should discuss appropriate methods and materials that can be stored on the cap.</p>
<p>D. Opportunities for Optimization</p>
<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p>Reduce monitoring frequency and parameter list when applicable.</p>

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the five-year review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: <u>Site 6 - DRMO</u>	Date of inspection: <u>April 11, 2001</u>
Location and Region: <u>New London County, CT</u>	EPA ID: <u>CTD980906515</u>
Agency, office or company leading the five-year review: <u>EPA Region I</u>	Weather/temperature: <u>Sunny, Low 50 degrees</u>
Remedy Includes (Check all that apply) <input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input checked="" type="checkbox"/> Other <u>Institutional controls, groundwater monitoring</u>	
<input checked="" type="checkbox"/> Inspection team roster attached <input checked="" type="checkbox"/> Site map attached	
II. INTERVIEWS (Check all that apply)	
1. O&M site manager <u>Richard Conant</u> _____ <u>4/11/01</u> _____ <div style="display: flex; justify-content: space-between; width: 100%;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. <u>(860) 694-5176</u> Problems, suggestions; <input type="checkbox"/> Report attached <u>Monitoring well O & M</u>	
2. O&M staff _____ _____ _____ <div style="display: flex; justify-content: space-between; width: 100%;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions; <input type="checkbox"/> Report attached _____	

3. Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency USEPA Region I

Contact K. Keckler RPM 4/11/01 (617)918-1385
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached Did not attend inspection.

Agency CTDEP

Contact Mark Lewis RPM 4/11/01 (860)424-3768
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached None provided during inspection.

Agency _____

Contact _____
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached _____

Agency _____

Contact _____
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached _____

4. Other interviews (optional) ☐ Report attached.

III. ONSITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)	
1.	O&M Manual and As-Built <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> As-built <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Maintenance Logs <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>Information not verified during inspection.</u>
2.	Site Specific Health and Safety Plan <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Contingency plan/emergency response plan <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>Field personnel follow plan when conducting groundwater monitoring.</u>
3.	O&M and OSHA Training Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>No O & M records. OSHA training records maintained by Navy's contractor.</u>
4.	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Other permits <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____
5.	Gas Generation Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
6.	Settlement Monument Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
7.	Groundwater Monitoring Records <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>Quarterly reports are issued by Navy.</u>
8.	Leachate Extraction Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
9.	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Water (effluent) <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____

10.

Daily Access/Security Logs☐ Readily available ☐ Up to date ☐ N/ARemarks DRMO (Site 6) is a secure area. Visitors sign in
and out.**IV. O&M COSTS**

1.

O&M Organization☐ State in-house ☐ Contractor for State
☐ PRP in-house ☒ Contractor for PRP
☐ Other _____

2.

O&M Cost Records☐ Readily available ☐ Up to date☐ Funding mechanism/agreement in place

Original O&M cost estimate _____

☐ Breakdown attached

Total annual cost by year for review period if available

From _____ To _____
Dates

Total cost

☐ Breakdown attachedFrom _____ To _____
Dates

Total cost

☐ Breakdown attachedFrom _____ To _____
Dates

Total cost

☐ Breakdown attachedFrom _____ To _____
Dates

Total cost

☐ Breakdown attachedFrom _____ To _____
Dates

Total cost

☐ Breakdown attached

3.

Unanticipated or Unusually High O&M Costs During Review PeriodDescribe costs and reasons: No O & M has been completed at the site. Costs
for groundwater monitoring for 1 year (4 quarters) have been
approximately \$120,000.00. This cost includes field work, analysis
data validation, and reporting.**V. GENERAL SITE CONDITIONS**

Whenever possible, actual site conditions should be documented with photographs.

A. Fencing

1.

Fencing damaged ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks _____

B. Site Access	
1.	Access restrictions, signs, other security measures <input checked="" type="checkbox"/> Location shown on map <input type="checkbox"/> N/A Remarks: <u>Restrictions, signs and fence in place.</u>
C. Perimeter Roads	
1.	Roads damaged <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Roads adequate <input checked="" type="checkbox"/> N/A Remarks: _____
D. General	
1.	Vandalism/trespassing <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No vandalism evident Remarks: _____
2.	Land use changes onsite <input checked="" type="checkbox"/> N/A Remarks: _____
3.	Land use changes offsite <input checked="" type="checkbox"/> N/A Remarks: _____
4.	Institutional controls (site conditions imply institutional controls not being enforced) <input type="checkbox"/> N/A Agency: _____ Contact: _____ Name _____ Title _____ Date _____ Phone no. _____ Problems; suggestions: <input type="checkbox"/> Report attached SOPA (Admin) New London Instruction 309018 - Site use restrictions (October 2000). _____
VI. LANDFILL COVERS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not applicable	
A. Landfill Surface	
1.	Settlement (Low spots) <input checked="" type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent: _____ Depth: _____ Remarks: <u>Possible area of settlement at southwest corner of Building 491. Approximately 60 to 50 feet from building.</u>
2.	Cracks <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Cracking not evident Lengths: _____ Widths: _____ Depths: _____ Remarks: _____

3.	Erosion <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____
4.	Holes <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Holes not evident Areal extent _____ Depth _____ Remarks _____
5.	Vegetative Cover <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks <u>N/A</u>
6.	Alternative Cover (armored rock, concrete, etc.) <input type="checkbox"/> N/A Remarks <u>Asphalt covers clay cap.</u>
7.	Bulges <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Bulges not evident Areal extent _____ Height _____ Remarks _____
8.	Wet Areas/Water Damage <input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____
B.	Benches <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)
1.	Flows Bypass Bench <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> N/A or okay Remarks _____

2.	Bench Breached	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
Remarks _____			
3.	Bench Overtopped	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
Remarks _____			
C.	Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement
Areal extent _____ Depth _____			
Remarks _____			
2.	Material Degradation	<input type="checkbox"/> Location shown on site map	
<input type="checkbox"/> No evidence of degradation			
Material type _____ Areal extent _____			
Remarks _____			
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
Areal extent _____ Depth _____			
Remarks _____			
4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
Areal extent _____ Depth _____			
Remarks _____			
5.	Obstructions	Type _____	<input type="checkbox"/> No obstructions
<input type="checkbox"/> Location shown on site map		Areal extent _____	
Size _____			
Remarks _____			
6.	Excessive Vegetative Growth	Type _____	
<input type="checkbox"/> No evidence of excessive growth			
<input type="checkbox"/> Vegetation in channels does not obstruct flow			
<input type="checkbox"/> Location shown on site map		Areal extent _____	
Remarks _____			

D.	Cover Penetrations	<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> Not applicable
1.	Gas Vents <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
Remarks _____			
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A		
Remarks _____			
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input checked="" type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A		
Remarks <u>O & M on covers, protective casings, and dedicated sampling equipment required.</u>			
4.	Leachate Extraction Wells <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Good condition <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Functioning <input type="checkbox"/> Needs O&M
Remarks _____			
5.	Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed <input checked="" type="checkbox"/> N/A
Remarks _____			
E.	Gas Collection and Treatment		
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Good condition	<input type="checkbox"/> Thermal destruction <input type="checkbox"/> Needs O&M	<input type="checkbox"/> Collection for reuse
Remarks _____			
2.	Gas Collection Wells, Manifolds and Piping		
<input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M			
Remarks _____			
F.	Cover Drainage Layer		
<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable			
1.	Outlet Pipes Inspected		
<input type="checkbox"/> Functioning <input type="checkbox"/> N/A			
Remarks _____			

2.	Outlet Rock Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable			
1.	Siltation	Areal extent _____	Depth _____ <input type="checkbox"/> N/A
<input type="checkbox"/> Siltation not evident			
Remarks _____			
2.	Erosion	Areal extent _____	Depth _____
<input type="checkbox"/> Erosion not evident			
Remarks _____			
3.	Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
4.	Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable			
1.	Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____	
Rotational displacement _____			
Remarks _____			
2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks _____			
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable			
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Areal extent _____		Depth _____	
Remarks _____			
2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Areal extent _____		Type _____	
Remarks _____			

3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____
4.	Discharge Structure <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____
VII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable	
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____ Depth _____ Remarks _____
2.	Performance Monitoring Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ <input type="checkbox"/> Evidence of breaching Remarks _____
VIII. GROUNDWATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable	
A.	Groundwater Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable
1.	Pumps, Wellhead Plumbing, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____
B.	Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable

1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
C.	Treatment System <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable
1.	Treatment Train (Check components that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <input type="checkbox"/> Metals removal <input type="checkbox"/> Air stripping <input type="checkbox"/> Filters _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ </div> <div style="width: 35%;"> <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Others _____ <input type="checkbox"/> Needs O&M </div> <div style="width: 5%;"> <input type="checkbox"/> Bioremediation </div> </div> Remarks _____ _____
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
3.	Tanks, Vaults, Storage Vessels <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs O&M Remarks _____ _____
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
5.	Treatment Building(s) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____ _____

6.	Monitoring Wells (pump and treatment remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____ _____
D. Monitored Natural Attenuation	
1.	Monitoring Wells (natural attenuation remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____ _____

IX. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

X. OVERALL OBSERVATIONS**A. Implementation of the Remedy**

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

The removal action and installation of a cap were effective in removing a significant amount of the source and eliminating exposure pathways to waste. The cap is also minimizing infiltration and contaminant migration. Groundwater monitoring is being conducted to verify its effectiveness. The results of the monitoring program will be discussed in the report.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

No O & M has been conducted at the site since the remedial action. Monitoring wells and dedicated sampling equipment are in need of maintenance and/or repair. An O & M plan for the site should be developed and implemented to ensure long-term protectiveness of the remedy.

<p>C. Early Indicators of Potential Remedy Failure</p>
<p>Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p>None noted during inspection.</p>
<p>D. Opportunities for Optimization</p>
<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p>When appropriate the monitoring program can be optimized by reducing the frequency of the sampling and analytical parameter list.</p>

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the five-year review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: Site 8 - Goss Cove Landfill	Date of inspection: April 10, 2001
Location and Region: New London County, CT	EPA ID: CTD980906515
Agency, office or company leading the five-year review: EPA Region I	Weather/temperature: Overcast, 50 degrees
Remedy Includes (Check all that apply) <input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other <u>At the time of the site inspection, the landfill cover was currently being installed.</u>	
<input checked="" type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached	
II. INTERVIEWS (Check all that apply)	
1. O&M site manager <u>Richard Conant</u> _____ <u>4/10/01</u> <div style="display: flex; justify-content: space-between;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input checked="" type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. <u>(860)694-5176</u> Problems, suggestions: <input type="checkbox"/> Report attached <u>No problems</u>	
2. O&M staff _____ <div style="display: flex; justify-content: space-between;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions: <input type="checkbox"/> Report attached _____	

3. Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency USEPA Region I

Contact K. Keckler RPM 4/10/01 (617) 918-1385
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached None provided during inspection.

Agency CTDEP

Contact Mark Lewis RPM 4/10/01 (860) 424-3768
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached None provided during inspection.

Agency _____

Contact _____
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached _____

Agency _____

Contact _____
 Name Title Date Phone no.

Problems; suggestions: ☐ Report attached _____

4. Other interviews (optional) ☐ Report attached.

III. ONSITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)	
1.	O&M Manual and As-Built <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> As-built <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Maintenance Logs <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
2.	Site Specific Health and Safety Plan <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Contingency plan/emergency response plan <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
3.	O&M and OSHA Training Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
4.	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Other permits _____ <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
5.	Gas Generation Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
6.	Settlement Monument Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
7.	Groundwater Monitoring Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
8.	Leachate Extraction Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____
9.	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Water (effluent) <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks _____

10. **Daily Access/Security Logs**
☐ Readily available ☐ Up to date ☐ N/A

Remarks _____

IV. O&M COSTS

1. **O&M Organization**
☐ State in-house ☐ Contractor for State
☐ PRP in-house ☐ Contractor for PRP
☐ Other _____

2. **O&M Cost Records**
☐ Readily available ☐ Up to date
☐ Funding mechanism/agreement in place
 Original O&M cost estimate _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From _____ To _____	_____	<input type="checkbox"/> Breakdown attached
Dates	Total cost	
From _____ To _____	_____	<input type="checkbox"/> Breakdown attached
Dates	Total cost	
From _____ To _____	_____	<input type="checkbox"/> Breakdown attached
Dates	Total cost	
From _____ To _____	_____	<input type="checkbox"/> Breakdown attached
Dates	Total cost	
From _____ To _____	_____	<input type="checkbox"/> Breakdown attached
Dates	Total cost	

3. **Unanticipated or Unusually High O&M Costs During Review Period**
 Describe costs and reasons: _____

V. GENERAL SITE CONDITIONS

Whenever possible, actual site conditions should be documented with photographs.

A. **Fencing** Fence in good condition.

1. **Fencing damaged** ☐ Location shown on site map ☐ Gates secured ☐ N/A
 Remarks _____

B. Site Access				
1.	Access restrictions, signs, other security measures	<input checked="" type="checkbox"/> Location shown on map	<input type="checkbox"/> N/A	
Remarks: <u>Fencing provides access restriction.</u>				
C. Perimeter Roads				
1.	Roads damaged	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Roads adequate	<input type="checkbox"/> N/A
Remarks: _____				
D. General				
1.	Vandalism/trespassing	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident	
Remarks: _____				
2.	Land use changes onsite	<input type="checkbox"/> N/A		
Remarks: <u>Land currently used for museum.</u>				
3.	Land use changes offsite	<input type="checkbox"/> N/A		
Remarks: _____				
4.	Institutional controls (site conditions imply institutional controls not being enforced)			<input type="checkbox"/> N/A
Agency: _____				
Contact: _____				
	Name	Title	Date	Phone no.
Problems; suggestions: <input type="checkbox"/> Report attached <u>SOPA (Admin) New London</u>				
<u>Instruction 509018 - Site Use Restrictions (October 2000)</u>				
VI. LANDFILL COVERS <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable				
A. Landfill Surface				
1.	Settlement (Low spots)	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident	
Areal extent: _____ Depth: _____				
Remarks: _____				
2.	Cracks	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Cracking not evident	
Lengths: _____ Widths: _____ Depths: _____				
Remarks: _____				

3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____		
4.	Holes <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Holes not evident Areal extent _____ Depth _____ Remarks _____		
5.	Vegetative Cover <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____		
6.	Alternative Cover (armored rock, concrete, etc.) <input type="checkbox"/> N/A Remarks _____		
7.	Bulges <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Bulges not evident Areal extent _____ Height _____ Remarks _____		
8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas/water damage not evident <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map </div> <div> Areal extent _____ Areal extent _____ Areal extent _____ Areal extent _____ </div> </div> Remarks _____		
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____		
B.	Benches <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	Flows Bypass Bench <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks _____		

2.	Bench Breached Remarks _____ _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks _____ _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
C.	Letdown Channels <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	Settlement Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement
2.	Material Degradation <input type="checkbox"/> No evidence of degradation Material type _____ Areal extent _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map	
3.	Erosion Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
4.	Undercutting Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
5.	Obstructions Type _____ <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No obstructions Size _____ Areal extent _____ Remarks _____ _____		
6.	Excessive Vegetative Growth Type _____ <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____ _____		

D.	Cover Penetrations <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable
1.	Gas Vents <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks _____ _____
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks _____ _____
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks _____ _____
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks _____ _____
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A Remarks _____ _____
E.	Gas Collection and Treatment
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
2.	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
F.	Cover Drainage Layer <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____

2.	Outlet Rock Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable			
1.	Siltation	Areal extent _____	Depth _____ <input type="checkbox"/> N/A
<input type="checkbox"/> Siltation not evident			
Remarks _____			
2.	Erosion	Areal extent _____	Depth _____
<input type="checkbox"/> Erosion not evident			
Remarks _____			
3.	Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
4.	Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
H. Retaining Walls <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable			
1.	Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____	
Rotational displacement _____			
Remarks _____			
2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks _____			
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable			
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Areal extent _____		Depth _____	
Remarks _____			
2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Areal extent _____		Type _____	
Remarks _____			

3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____ _____
4.	Discharge Structure <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____
VII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable	
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____ Depth _____ Remarks _____ _____
2.	Performance Monitoring Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ <input type="checkbox"/> Evidence of breaching Remarks _____ _____
VIII. GROUNDWATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable	
A.	Groundwater Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable
1.	Pumps, Wellhead Plumbing, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks _____ _____
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
B.	Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable

1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
C.	Treatment System <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable
1.	Treatment Train (Check components that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <input type="checkbox"/> Metals removal <input type="checkbox"/> Air stripping <input type="checkbox"/> Filters _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ </div> <div style="width: 35%;"> <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Others _____ <input type="checkbox"/> Needs O&M </div> <div style="width: 5%;"> <input type="checkbox"/> Bioremediation </div> </div> Remarks _____ _____
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
3.	Tanks, Vaults, Storage Vessels <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs O&M Remarks _____ _____
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M Remarks _____ _____
5.	Treatment Building(s) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____ _____

6.	Monitoring Wells (pump and treatment remedy) <input type="checkbox"/> Properly secured/locked. <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A
Remarks _____ _____	
D. Monitored Natural Attenuation	
1.	Monitoring Wells (natural attenuation remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A
Remarks _____ _____	

IX. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

X. OVERALL OBSERVATIONS**A. Implementation of the Remedy**

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

The engineered cap system is currently being installed and once complete will be effective at eliminating direct exposure to the waste. Cap operation and maintenance and land use controls will ensure effectiveness into the future. In addition, the cap should also minimize contaminant migration from the waste. A groundwater monitoring plan has been developed and will be implemented once construction of the cap is complete.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

The USEPA Region I and CTDEP are doing regular inspections on the progress of the cap during its construction. Their findings are being relayed to the Navy and it's RAC. The issues are addressed in an appropriate manner.

C. Early Indicators of Potential Remedy Failure
<p>Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p>Not Applicable</p>
D. Opportunities for Optimization
<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p>Not Applicable</p>